

JC07 Rec'd PCT/PTO 28 JAN 2002


FORM PTO-1390 (REV 5-93)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY DOCKET NO. Q8223.006	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				DATE: January 28, 2002	
				U.S. APPLN. NO. (IF KNOWN, SEE 37 C.F.R. 1.5) <b>10/048018</b>	
INTERNATIONAL APPLICATION NO. PCT/CH00/00403		INTERNATIONAL FILING DATE July 24, 2000		PRIORITY DATE CLAIMED July 27, 1999	
TITLE OF INVENTION: DISMOUNTABLE PREFABRICATED STRUCTURE, IN PARTICULAR FOR A HOUSE, AND METHOD FOR MAKING SAME					
APPLICANT(S) FOR DO/EO/US: Jean Louis MOREL					
1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371. (THE BASIC FILING FEE IS ATTACHED)					
2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.					
3. <input type="checkbox"/> This express request to begin national examination procedures [35 U.S.C. 371(f)] at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).					
4. <input checked="" type="checkbox"/> A proper demand for International Preliminary Amendment was made by the 19th month from the earliest claimed priority date.					
5. <input checked="" type="checkbox"/> A copy of the International Application as filed [35 U.S.C. 371(c)(2)] <ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).</li> <li>b. <input type="checkbox"/> has been transmitted by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ul>					
6. <input type="checkbox"/> A translation of the International Application into English [35 U.S.C. 371(c)(2)].					
7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 [35 U.S.C. 371(c)(3)] <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau)</li> <li>b. <input type="checkbox"/> have been transmitted by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ul>					
8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 [35 U.S.C. 371(c)(3)].					
9. <input type="checkbox"/> An oath or declaration of the inventor(s) [35 U.S.C. 371(c)(4)].					
10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 [35 U.S.C. 371(c)(5)].					
Items 11 - 16 below concern other document(s) or information included:					
11. <input type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98.					
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included.					
13. <input type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.					
14. <input type="checkbox"/> A substitute specification.					
15. <input type="checkbox"/> A change of power of attorney and/or address letter.					
16. <input type="checkbox"/> Other item(s) or information: <input type="checkbox"/> CHECK NO. <input type="checkbox"/> Drawings ( <input type="checkbox"/> sheets)					

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U.S. APPL. NO. (IF KNOWN) SEE 37 C.F.R. 1.500 Unknown <div style="font-size: 1.5em; font-weight: bold; margin-top: 10px;">10/048018</div>	INTERNATIONAL APPLICATION NO. PCT/CH00/00403	ATTORNEY DOCKET NO. 08223.006 DATE: January 28, 2002
17. <input checked="" type="checkbox"/> The following fees are submitted: <b>Basic National Fee [37 C.F.R. 1.492(a)(1)-(5)]:</b> Search Report has been prepared by the EPO or JPO.....\$890.00 International preliminary examination fee paid to USPTO (37 C.F.R. 1.482).....\$710.00 No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but international search fee paid to USPTO [37 C.F.R. 1.445(a)(2)].....\$1040.00 Neither international preliminary examination fee (37 C.F.R. 1.482) or international search fee [37 C.F.R. 1.445(a)(2)] paid to USPTO.....\$1040.00 International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4).....\$ 100.00		CALCULATIONS      PTO USE ONLY
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$ 890.00
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date [37 C.F.R. 1.492(e)].		\$ 130.00
Claims	Number Filed	Number Extra
Total Claims	11 - 20 =	X \$ 18.00
Independent Claims	2 - 3 =	X \$ 84.00
Multiple dependent claim(s) (if applicable)		+ \$280.00
TOTAL OF ABOVE CALCULATIONS =		\$ 1020.00
Reduction by one-half for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 C.F.R. 1.9, 1.27, 1.28).		\$ 510.00
SUBTOTAL =		\$ 510.00
Processing fee of \$130.00 for furnishing the English translation later the <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date [37 C.F.R. 1.492(f)].		\$ 130.00
TOTAL NATIONAL FEE =		\$ 640.00
Fee for recording the enclosed assignment [37 C.F.R. 1.21(h)]. The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property		\$ 40.00
TOTAL FEES ENCLOSED =		\$ 680.00
		Amount to be refunded
		\$ 0
		Charged
		\$ 680.00
a. <input checked="" type="checkbox"/> A check in the amount of \$680.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. 50-0548 in the amount of \$      to cover the above fee. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0548.		
NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive [37 C.F.R. 1.137(a) or (b)] must be filed and granted to restore the application to pending status.		
SEND ALL CORRESPONDENCE TO: Liniak, Berenato, Longacre & White 6550 Rock Spring Drive Suite 240 Bethesda, Maryland 20817 Tel: (301) 896-0600 Fax: (301) 896-0607		
 Matthew Stavish Reg. No. 36,286		

DISMOUNTABLE PREFABRICATED STRUCTURE, NOTABLY DWELLING, AND  
A PROCESS FOR ITS MANUFACTURE

The object of the invention is a dismountable prefabricated structure, notably a  
5 dwelling, having prefabricated sandwich panels, posts and crosspieces, all these elements  
being modular, and a process for its manufacture.

Many prefabricated structures having, for example, sandwich panels, posts and  
crosspieces are known:

In the patent DE 19807914, a prefabricated sandwich element for building  
10 construction is described. This element is formed of two plates constituting its exterior  
faces between which is cast a light concrete, with density included between 360 kg/m<sup>3</sup> and  
790 kg/m<sup>3</sup>. The building is constructed with elements having the height of one story,  
consequently these elements are too heavy to be handled without hoisting gear. These  
elements are placed one next to the other with the vertical elements placed between them.  
15 The stability of the structure is ensured by the fact that the elements are screwed to the  
posts. The purpose of this invention is to save time when erecting the building.

In the patent US 3203145, a modular prefabricated house is described. By modular is  
meant the fact of having a set of elements having standard dimensions making it possible  
to construct various buildings. In this document, the house is made of a steel frame on  
20 which sandwich panels are fixed. This structure also requires the intervention of specialists  
using hoisting gear, notably for erecting the framework.

In the patent US 4852310, a structure with insulation means is described made with  
prefabricated sandwich panels. This structure is not designed to be dismantled and is  
complicated enough to require the intervention of specialists.

In all the prefabricated structures known today, specialists must be called upon and hoisting gear used. In no known case is a dismantable modular structure erected by a single man and without hoisting gear described.

Indeed, one of the goals of the invention is to provide a structure made of simple, light elements allowing one man alone to erect it easily, without resorting to hoisting means or complicated assembly means.

Another goal of this invention is to provide a cheap structure which is heat insulated and uses biodegradable materials.

A third goal is to provide a structure with exterior walls allowing humidity to migrate towards the exterior, in other words to provide a structure having walls with a certain porosity by avoiding the use of completely impervious materials, that is non porous materials, which do not make this migration possible, for example perlite dust and fibrous peat silicate panel waste.

A fourth goal is to provide a structure which has no glue or mortar, which can be mounted and dismantled rapidly without damaging the elements so that it can be used in the case of temporary structures, for example during sporting events, natural catastrophes or in time of war.

These goals are reached with the dismantable prefabricated structure, in accordance with the invention, notably dwellings, having prefabricated sandwich panels, posts and crosspieces, all these elements being modular, characterized in that the sandwich panels are comprised of two rectangular plates with a height included between 0.7 m and 3.5 m made of a base material of hydrosilicate and conifer cellulose having a specific mass equal to or less than 350 kg/m<sup>3</sup> and thickness included between 3 cm and 5 cm, maintained separated by two horizontal struts and one vertical strut placed on at least three sides of the plates at a certain distance from their edges in order to constitute an interior

case and an exterior groove on at least three sides of the panel and by a fourth strut either set back from the edge in order to form a groove similar to the other sides or extending in order to constitute a post. This case is filled with an insulating material. The stability of the structure ensured by the crosspieces and/or tie rods under tension maintaining the panels  
5 tightly in place. The form of the structure is defined by prefabricated angle parts.

The structure in accordance with the invention provides a structure included between structures made of prefabricated elements such as bricks or cement sections and structures made of heavy prefabricated elements such as prefabricated panels. Indeed, a structure in accordance with the invention has the advantages of both types of structures  
10 without the disadvantages. That is it can be built by a single man but much more quickly than structures made of bricks or cement sections and does not require any hoisting gear like heavy prefabricated structures.

The purpose of the invention is also to provide a process for making such a structure, characterized in that a platform is built having a perceptibly smaller surface than  
15 the structure. A first angle part is placed on this platform, then two ledgers are placed in the angle part which is fastened to the platform. Then a first post is placed having a height such that it is flush with the bottom of the groove provided in the angle of the angle part as well as two posts of roughly the same height in the spaces foreseen in the angle part. Finally, two sandwich panels are placed on either side of the angle part in order to enclose  
20 the last two posts placed, which will make up the start of two walls. These last operations are repeated in order to constitute a row of posts until another angle of the structure or a post making up the frame of a door or window is met. Then a first crosspiece is placed in the groove provided in the upper part of the sandwich panels making up the first wall and the same thing is done for the second wall, the two crosspieces being assembled using the  
25 part provided for this in the post placed in the angle of the angle part. Once the second row

of sandwich panels is placed, the crosspiece is tightened using bolts. All these operations are repeated until the whole structure is finished.

The invention will be better understood and its characteristics and advantages appear more clearly upon reading the description of the structural shapes given as an example with respect to the drawings on which:

Figure 1 represents a schematic view of an end gable of a structure in accordance with the invention,

Figure 2 represents a schematic view of the framework of the face represented in figure 1,

Figure 3a represents a view in perspective of a sandwich element,

Figure 3b represents a view in perspective of another realization of a sandwich element,

Figure 4 represents a schematic view of an angle part,

Figure 5 represents the angle part of figure 4 after the crosspieces have been placed,

Figure 6 represents schematically a series of modular elements.

As may be seen in figure 1, an end gable of a structure in accordance with the invention will have standard rectangular panels 1 whose dimensions in this case are 1 m x 1.25 m and 4 cm thick for the exterior plates 41, 42 represented in figure 3a. Both plates are held apart by the struts 43, 44, made of a hydrosilicate and conifer cellulose base having a specific mass equal to or less than 350 kg/M<sup>3</sup> identical to the one of the plates or in wood at a distance of 12 cm. The struts will be set back from the edges at a distance of 6 cm in order to form a groove 46 (see figure 3a) 6 cm deep and 12 cm wide all around the panel. The exterior plates 41, 42 will be, for example, in «THERMOSIL » (registered

trade mark), which is a biodegradable product with hydrosilicate and conifer cellulose base with specific mass less than or equal to 350 kg/m<sup>3</sup>.

The case made of the plates and struts will be filled with an insulating material 45, for example expanded volcanic sand mortar, for example « PERLITE » (registered trade mark), with « THERMOSIL » granulates. A panel having the dimensions defined above  
5 will weigh at most 50 kg, which makes it possible to handle it without using hoisting gear.

In figure 3b is represented a variant of the panel represented in figure 3a, with the same reference signs for the same characteristics. This variant differs from the one in figure 3a by the fact that the panel has three grooves, an upper one, a lower one and a  
10 vertical one, the fourth groove being replaced by an element 33a, which will be used as a post once the panel has been placed and will be put into the groove of the adjacent panel.

The face also has angle parts 7, see figures 4 and 5. As may be seen in figure 4, an angle part has a first plate 41 identical to one of the plates making up a standard panel and a second plate 47 of the same height but with a width 4 cm smaller, that is the thickness of  
15 the panel. The plate 47 placed parallel to plate 41 at a distance of 12 cm is maintained in this position by the struts 43 in order to create a groove 46 at the end of the panel. At the other end of the panel is placed at a right angle a plate 50 with the same height and width equal to half less 4 cm in the described structural shape of a standard panel. A fourth plate 49 is placed parallel to plate 50 at 12 cm in order to create a panel start with a groove 46.  
20 This disposition makes an empty space appear with a square section of 12 cm in the angle.

The structure will be made on a platform 8 previously built of wood or concrete. You start by placing an angle part, for example part 7 as well as a ledger element 21, see figure 2, which will be fastened on the platform using a lag bolt 23. Then the post 28 will be placed in the angle of the angle part and a post 30 in the groove of the angle part. A first  
25 standard sandwich panel will be put against the angle part. The height of the posts 28 and

30 is such that, once the posts are placed, the upper part of the posts is flush with the upper groove of the sandwich panels. After this, a post will be placed into groove 46 of the sandwich panel and the operation will be repeated until post 32 is reached, which will have a height equal to one story.

5           The operation described above will be done in the same way on the face (not represented) perpendicular to the end gable represented in figures 1 and 2. When the first row of sandwich panels is placed on both faces, a first crosspiece 26 will be placed in the upper groove of the sandwich panels (see also figure 5) which will rest on the posts 30. The same thing will be done on the perpendicular face (not represented) by placing the crosspiece 25. Both crosspieces 25 and 26 will be screwed together on post 28 using a bolt 10 24 especially provided for this. The bolt 31 will then be placed but not tightened completely but enough to maintain post 32 in place. The same operations will be done in the same way as above, that is post 29 is placed and screwed onto both crosspieces 25, 26 using bolt 24 and a second angle part 9 on the first angle part 7. The sandwich panels 15 separated by posts 33 will be placed. Once all the panels and all the posts are in place, bolt 31 will be tightened, which ensures the stability of this end of the wall. The operation is repeated starting on the right-hand angle in figure 1. Once this second piece of wall is finished, a space between the wall ends remains in which a doorframe 3 will be placed. The width of the space is a multiple of a panel width in the form described 5/4, that is 1.25 20 m. The crosspiece 34 will be tightened by a bolt 35 placed roughly in its middle. Above the door, a panel with width equal to a half panel is placed in the flat position.

The rest of the face will be made in the same way, always placing panels or multiples or sub-multiples of panels, for example panels 4 and 6 surrounding a window 5.



Figure 6 represents in cross section and in layout a set of panels and its sub-multiples as well as an angle part, which in the represented case has two half-panels as a start for the wall.

Even though the preceding description refers to a preferred structural shape for the invention, modifications can be made without departing from the spirit of the invention,  
5 notably concerning the dimensions of the panels, posts and crosspieces surrounding a window 5.

## Claims

1. Dismountable prefabricated structure, notably a dwelling, made of prefabricated sandwich panels, posts and crosspieces, all these elements being modular, characterized in  
 5 that the sandwich panels (1) are comprised of two rectangular plates (41, 42) with height included between 0.7 m and 3.5 m made of a hydrosilicate and conifer cellulose base material having a specific mass equal to or less than 350 kg/m<sup>3</sup> and thickness included between 3 cm and 5 cm, maintained separated by two horizontal struts (43, 44) and a  
 10 vertical strut placed on at least three sides of the plates at a certain distance from their edges in order to constitute an interior case and an exterior groove (46) on at least three sides of the panel and by a fourth strut either set back from the edge to make a groove similar to the one of the other sides, or extending from it so as to make a post, and so that this case may be filled with an insulating material (45), the stability of the structure being  
 15 ensured by crosspieces and/or ties (25,26,34) under tension maintaining the panels tightly in place, and the structural shape defined by prefabricated angle parts (7).

2. Structure in accordance with claim 1, characterized in that the sandwich panels include a base panel with rectangular shape and panels having for width the three fourths,  
 half or quarter of the dimension of the base panel, keeping the same height as the base  
 20 panel.

3. Structure in accordance with claim 1 or 2, characterized in that each horizontal row of panels has in its upper part a crosspiece or a tightened continuous horizontal tie maintaining the set of panels tight, and in that each panel is separated from the next by a

post of height equal to the height of the vertical struts of the panel and placed under the crosspiece.

4. Structure in accordance with one of the claims 1 to 3, characterized in that the  
5 insulating material is an expanded volcanic sand mortar mixed with hydrosilicate and conifer cellulose base granulates.

5. Structure in accordance with one of the claims 1 to 4, characterized in that each  
10 angle part is prefabricated in the plant and made of two exterior plates placed at a right angle and two interior plates parallel to the exterior plates in the same material as the sandwich panels and separated by the same distance as the sandwich panels by struts leaving in the angle an empty space provided for receiving a post and having an insulating material between the plates.

15 6. Structure in accordance with one of the claims 1 to 5, characterized in that the posts and the crosspieces have a square or rectangular section and in that the distance of the struts from the edge of the plates is equal to half the side of the square or rectangular section of the crosspieces and posts and the interval between the plates is equal to the side of this square or rectangular section.

20 7. Structure in accordance with one of the claims 1 to 6, characterized in that the posts and crosspieces are in solid or glued laminated wood and the struts of the panels in hydrosilicate and conifer cellulose base material having a specific mass equal to or less than 350 kg/m<sup>3</sup> identical to the one of the plates, in wood or in metal.

25

8. Structure in accordance with one of the claims 1 to 6, characterized in that the posts and crosspieces and/or ties are in metal, light reinforced concrete or plastic, for example polyvinyl chloride, and the struts of the panels are in wood or in hydrosilicate and conifer cellulose base material having a specific mass equal to or less than 350 kg/M<sup>3</sup>

5 identical to the one of the plates.

9. Structure in accordance with one of the claims 2 to 8, characterized in that it has the door and window frames having modular dimensions relative to the panels, the posts and the crosspieces, that is to say their width is a multiple of the width of the base panel.

10

10. Manufacturing process of a structure in accordance with one of the above claims, characterized in that a platform is built having a surface roughly smaller than the structure. A first angle part is placed on this platform, then two ledgers in the angle part that are fastened on the platform. Then a first post is placed having a height such that it is flush with the bottom of the groove provided in the angle of the angle part as well as both posts roughly of the same height in the spaces provided in the angle part. The two sandwich panels are placed on each side of the angle part in order to enclose the last two posts placed, which constitute the start of both walls. These last operations are repeated so that a row of panels is constituted until another angle of the structure or a post making up a door or window frame is reached. Then a first crosspiece is placed in the groove provided in the upper part of the sandwich panels constituting a first wall and the same thing is done for the second wall, both crosspieces being assembled using a part provided for this in the post placed in the angle of the angle part. Once the second row of sandwich panels is placed, the crosspieces and/or ties are tightened. All these operations will be repeated until the whole structure is completed.

25

11. Process in accordance with the claim characterized in that the platform is made of wood, concrete or metal.

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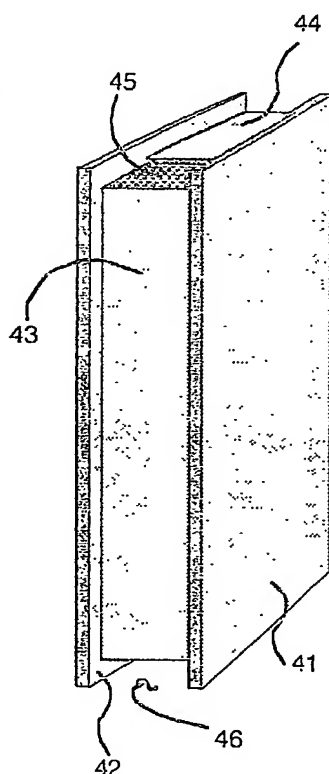
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[Suite sur la page suivante]

(54) Title: DISMOUNTABLE PREFABRICATED STRUCTURE, IN PARTICULAR FOR A HOUSE, AND METHOD FOR MAKING SAME

(54) Titre: CONSTRUCTION PREFABRIQUEE DEMONTABLE, NOTAMMENT MAISON D'HABITATION, ET UN PROCEDE POUR SA FABRICATION



(57) Abstract: The invention concerns a structure aiming at providing a building consisting of light and simple elements enabling it to be easily constructed by one single person, without requiring lifting means or complex assembling means. Said structure comprises prefabricated sandwich panels, posts, crossbeams and tie-rods, all said elements being modular. The sandwich panels consist of two plates having a height ranging between 0.7 m and 3.5 m made of a material based on hydrosilicate and conifer cellulose having a specific mass not more than 350 kg/m<sup>3</sup> and thickness ranging between 3 cm and 5 cm, maintained spaced apart by spacers arranged on the periphery of the plates at some distance from the edges thereof so as to form an inner casing and an outer groove, casing filled with insulating material. The stability of the structure is provided by tensioned crossbeams and/or tie rods (25, 26, 34) maintaining the panels clamped in position. The shape of the structure is determined by prefabricated corner parts.

(57) Abrégé: Cette construction a pour but de fournir une construction constituée d'éléments simples légers permettant à un homme seul de la construire facilement, sans recours ni à des moyens de levage, ni à des moyens d'assemblage compliqués. Cette construction comporte des panneaux sandwich préfabriqués, des poteaux et des traverses et tirants, tous ces éléments étant modulaires. Les panneaux sandwich sont constitués de deux plaques de hauteur comprises entre 0,7 m et 3,5 m et un matériau à base d'hydrosilicate et de cellulose de conifères ayant une masse spécifique égale ou inférieure à 350 kg/m<sup>3</sup> et d'épaisseur comprise entre 3 cm et 5 cm, maintenues écartées par des entretoises disposées sur le pourtour des plaques à une certaine distance des bords de ces dernières de manière à constituer un caisson intérieur et une gorge extérieure, caisson rempli de matière isolante. La stabilité de la construction est assurée par des traverses et/ou des tirants (25, 26, 34) en tension maintenant les panneaux serrés en place. La forme de la construction est définie par des pièces d'angle préfabriquées.

WO 01/07725 A1

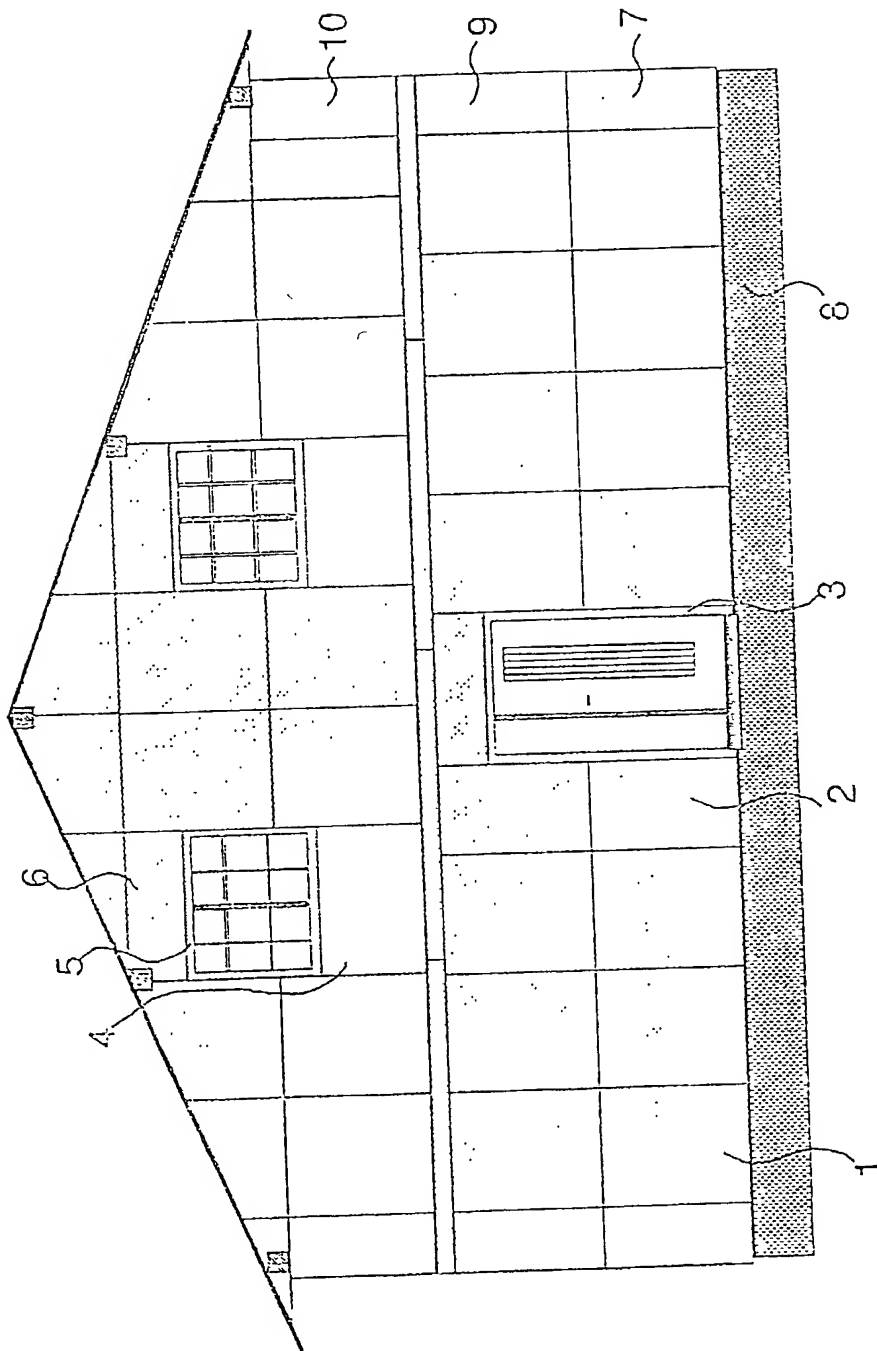


Fig. 1

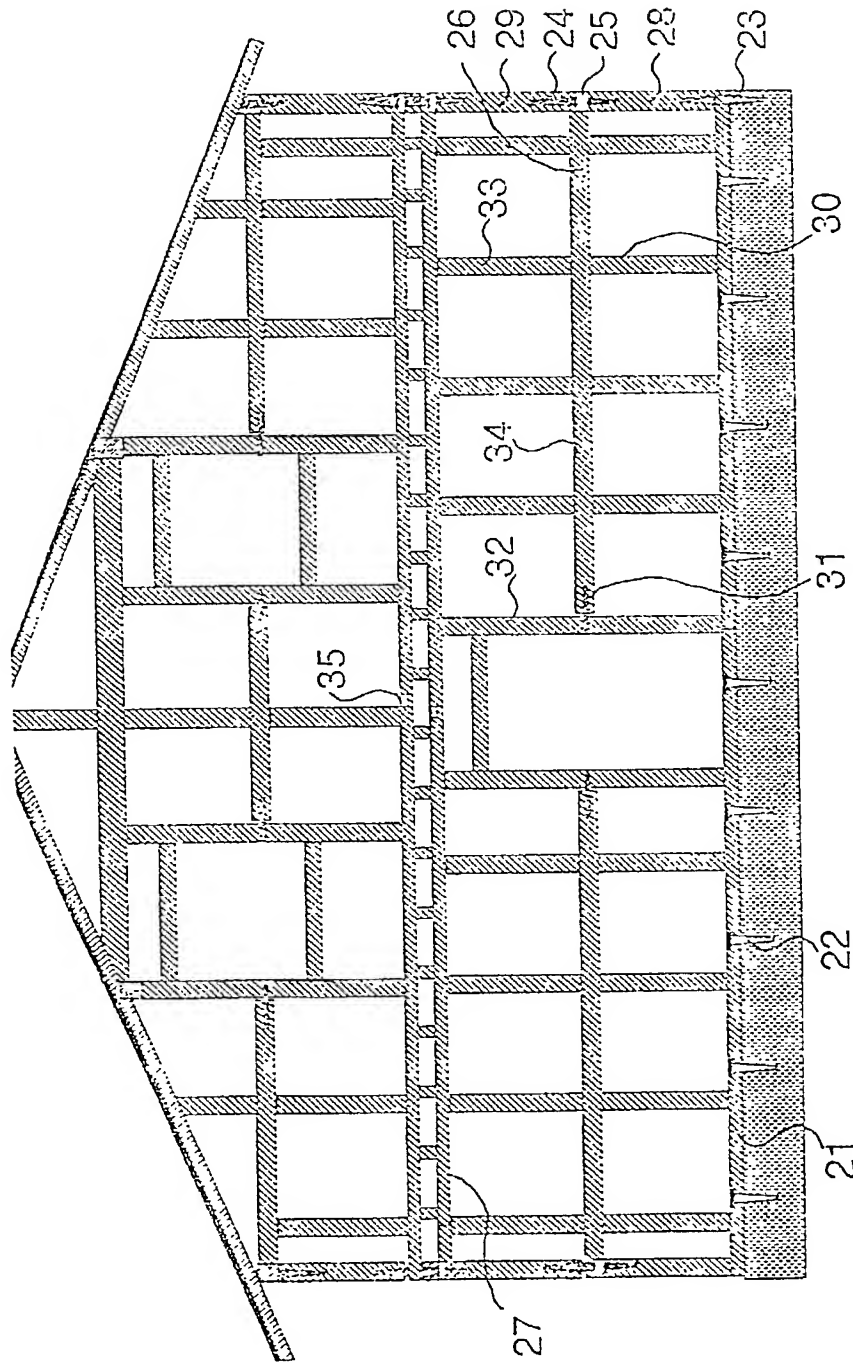
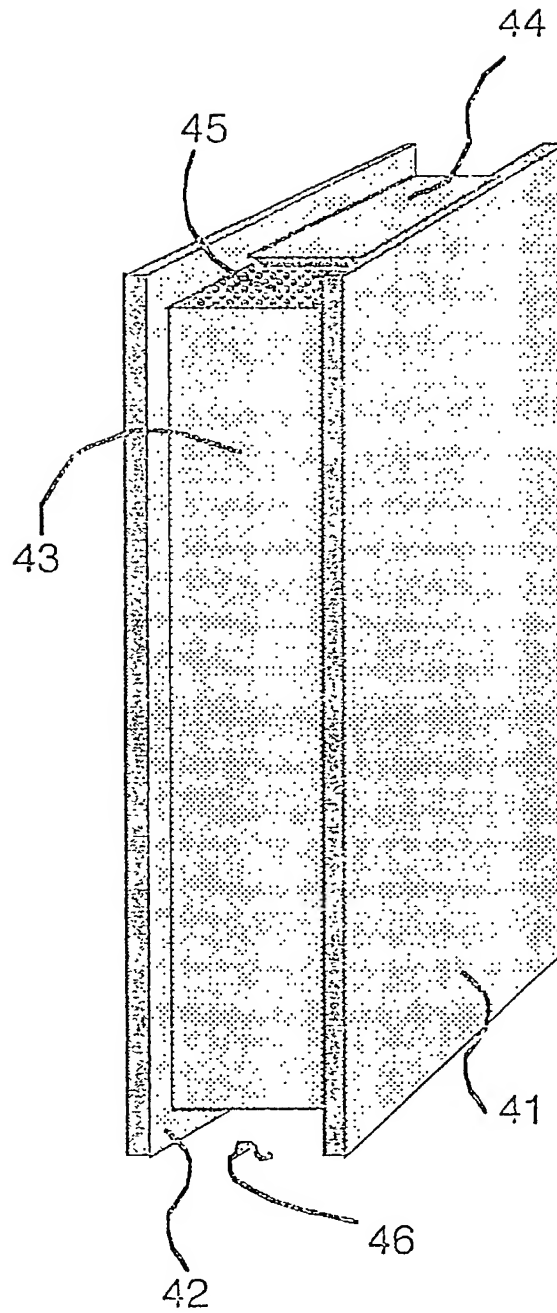


Fig. 2





**Fig. 3<sub>a</sub>**

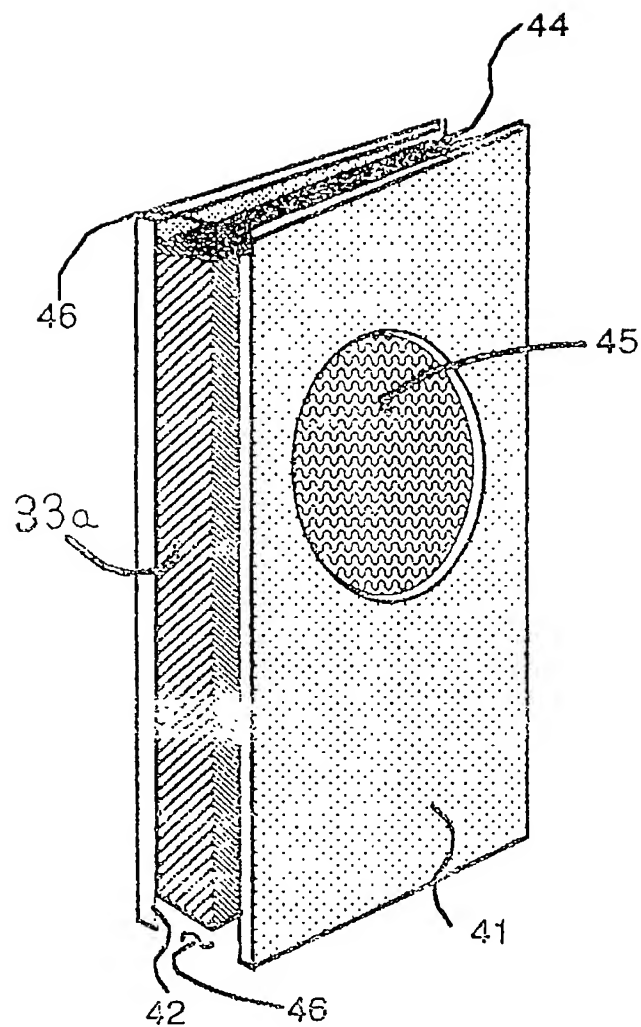
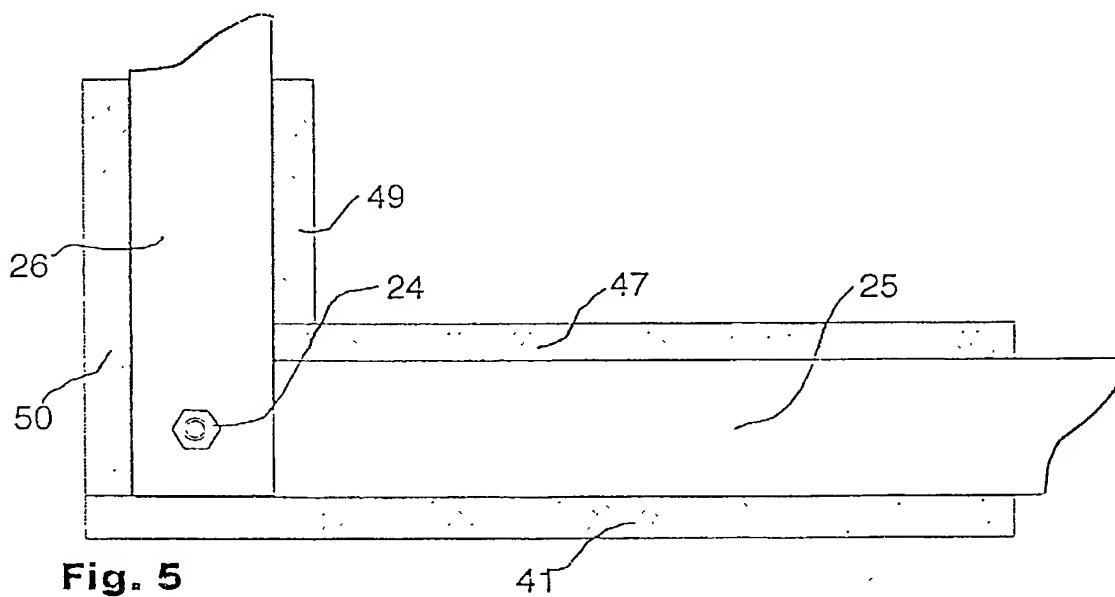
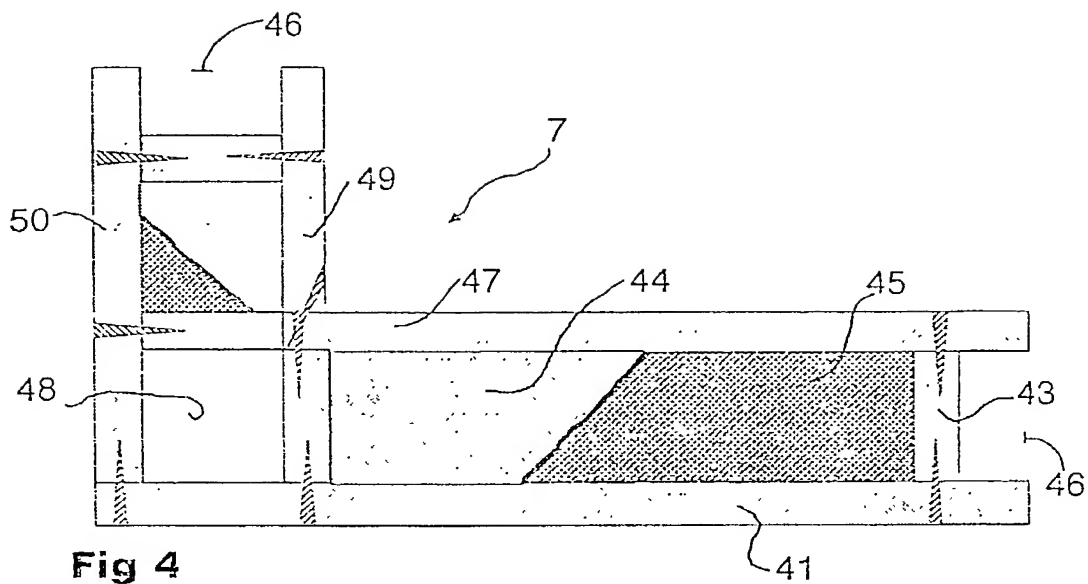


Fig 3 b



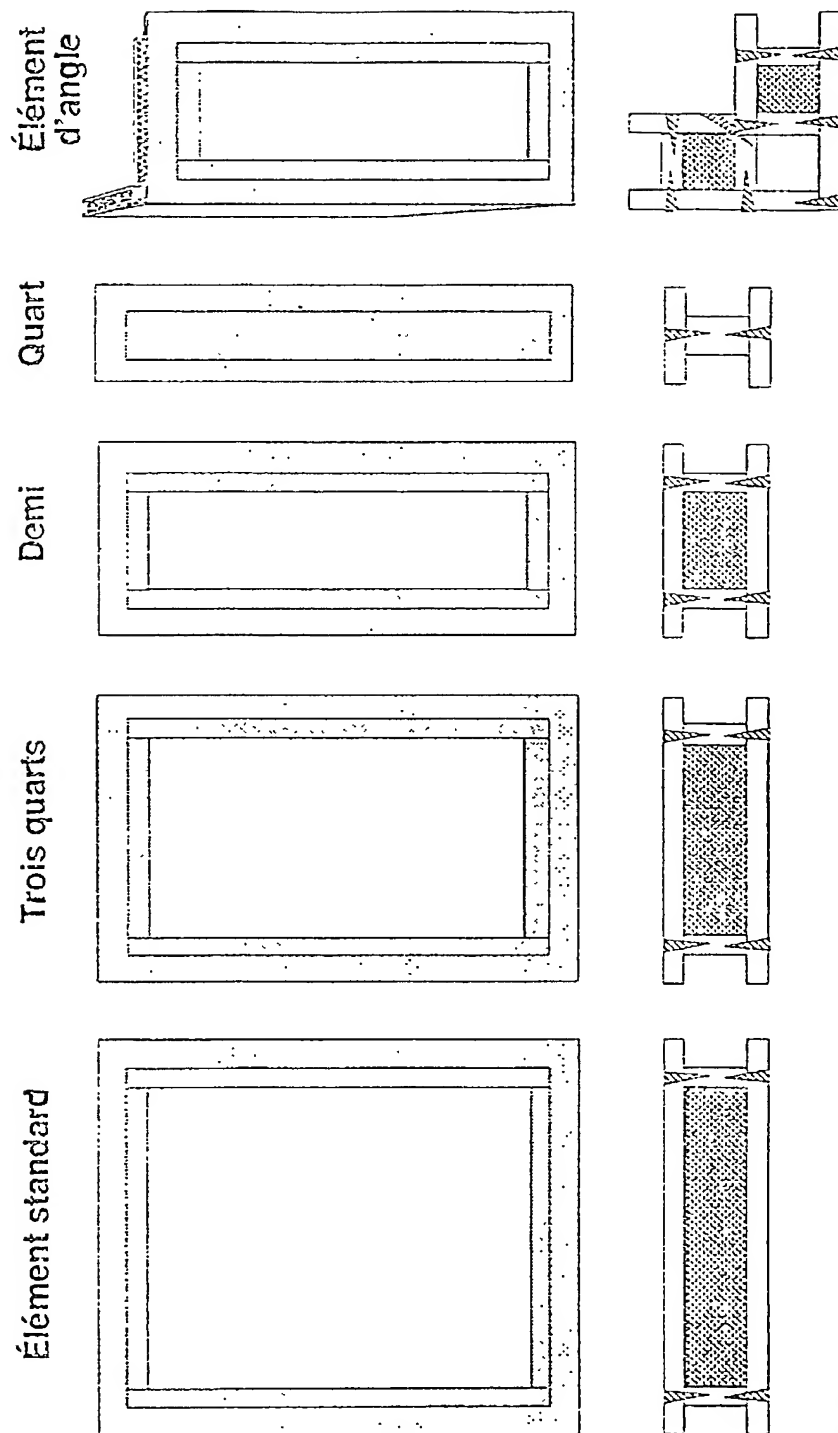


Fig. 6

**Declaration and Power of Attorney for Patent Application****Déclaration et Pouvoirs pour Demande de Brevet****French Language Declaration**

En tant que l'inventeur nommé ci-après, je déclare par le présent acte que:

Mon domicile, mon adresse postale et ma nationalité sont ceux figurant ci-dessous à côté de mon nom.

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée

Construction préfabriquée démontable,  
notamment maison d'habitation et un  
procédé pour sa fabrication.

et dont la description est fournie ci-joint à moins que la case suivante, n'ait été cochée:

- ☐ a été déposée le 24 juillet 2000  
sous le numéro de demande des Etats-Unis ou le  
numéro de demande international PCT  
WO 01/07725 et modifiée le  
\_\_\_\_\_ (le cas échéant).

Je déclare par le présent acte avoir passé en revue et compris le contenu de la description ci-dessus, revendications comprises, telles que modifiées par toute modification dont il aura été fait référence ci-dessus.

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

the specification of which is attached hereto unless the following box is checked:

- ☐ was filed on \_\_\_\_\_  
as United States Application Number or PCT  
International Application Number  
\_\_\_\_\_ and was amended on  
\_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

## French Language Declaration

Je revendique par le présent acte avoir la priorité étrangère, en vertu du Titre 35, § 119(a)-(d) ou § 365(b) du Code des Etats-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, § 365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les Etats-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée.

Prior foreign application(s)  
Demande(s) de brevet antérieure(s)

(Number) (Numéro)	(Country) (Pays)
CH 00/00403	Suisse
(Number) (Numéro)	(Country) (Pays)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 119(e) du Code des Etats-Unis, de toute demande de brevet provisoire effectuée aux Etats-Unis et figurant ci-dessous.

(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)
(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 120 du Code des Etats-Unis, de toute demande de brevet effectuée aux Etats-Unis, ou en vertu du Titre 35, § 365(e) du même Code, de toute demande internationale PCT désignant les Etats-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, § 112 du Code des Etats-Unis, je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande.

(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)
(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)

Je déclare par le présent acte que toute déclaration ci-incluse est, à ma connaissance, véridique et que toute déclaration formulée à partir de renseignements ou de suppositions est tenue pour véridique; et de plus, que toutes ces déclarations ont été formulées en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d'une incarcération, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des Etats-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci.

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365 (b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Claimed  
Droit de priorité revendiqué

(Day/Month/Year Filed) (Jour/Mois/Année de dépôt)	<input type="checkbox"/>
27 juillet 1999	<input checked="" type="checkbox"/>
(Day/Month/Year Filed) (Jour/Mois/Année de dépôt)	<input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(e) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Status) (patented, pending, abandoned) (Statut) (breveté, en cours d'examen, abandonné)
(Status) (patented, pending, abandoned) (Statut) (breveté, en cours d'examen, abandonné)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**French Language Declaration**

**POUVOIRS:** En tant que l'inventeur cité, je désigne par la présente l'(les) avocat(s) et/ou agent(s) suivant(s) pour qu'ils poursuive(nt) la procédure de cette demande de brevet et traite(nt) toute affaire s'y rapportant avec l'Office des brevets et des marques: (mentionner le nom et le numéro d'enregistrement).

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

Adresser toute correspondance à:

Send Correspondence to:

Adresser tout appel téléphonique à:  
(nom et numéro de téléphone)

Direct Telephone Calls to:  
(name and telephone number)

Nom complet de l'unique ou premier inventeur <u>Morcl Jean Louis</u>	Full name of sole or first inventor
Signature de l'inventeur <u>[Signature]</u> Date <u>02.07.02</u>	Inventor's signature Date
Domicile <u>CH-1618 Châtel-St-Denis</u>	Residence
Nationalité <u>Suisse</u>	Citizenship
Adresse postale <u>CH-1618 Châtel-St-Denis</u>	Post Office Address
<u>Rte du Lac de Lussy 82 CHX</u>	
Nom complet du second co-inventeur, le cas échéant	Full name of second joint inventor, if any
Signature du second inventeur Date	Second Inventor's signature Date
Domicile	Residence
Nationalité	Citizenship
Adresse postale	Post Office Address

(Fournir les mêmes renseignements et la signature de tout co-inventeur supplémentaire.)

(Supply similar information and signature for third and subsequent joint inventors.)